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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/653,764	09/01/2000	Sudhindra P. Herle	SAMS01-00090	6143

23990 7590 12/12/2005

DOCKET CLERK
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EXAMINER

SIMITOSKI, MICHAEL J

ART UNIT

PAPER NUMBER

2134

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/653,764

Applicant(s)

HERLE, SUDHINDRA P.

Examiner

Michael J. Simitoski

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 October 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The response of 4/25/2005 was received and considered.
2. Claims 1-24 are pending.

Response to Arguments

3. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection. However, the elements of Applicant's response with respect to the newly presented grounds of rejection are discussed below.

4. In general, Bao teaches sending TCP/IP packets over radio using at least RLP packets (sending TCP/IP data over a radio/data burst protocol). Gellens teaches the provisioning of a mobile device and converting TCP data to I-683A data/data burst. Raith teaches radio/cellular communication, which commonly uses cells to differentiate coverage areas and base stations for communicating with mobile units. Finally, Salo teaches that the IP Sec standard is known in the art and can provide encryption at the packet-processing layer (specifically, col. 13 lines 14-20).

5. Applicant's response (p. 9) makes a general allegation that the combination of Bao, Gellens and Raith does not meet the limitations of claims 1, 9 & 17. However, Applicant is directed to the Salo reference in combination with the above references.

6. Applicant's response (p. 9) argues that "there is no motivation for one skilled in the art to selectively combine elements of the Bao, Gellens and Raith references and then seek out other elements ...". However, as discussed below with respect to Applicant's specific arguments to the Salo reference, Gellens, Salo and the general knowledge of one having ordinary skill in the art at

the time the instant invention was made would lead one to seek out the benefits of the basic packet-based encryption principles in Salo.

7. Applicant's response (p. 10, ¶2 – p. 12, ¶2) argues that there “is no disclosure or suggestion within the Salo reference of a mobile station capable of communicating with a plurality of base stations in a wireless network, a system to secure over-the-air administration of a wireless mobile station via a base station in a wireless network, or a method of securely transmitting to a wireless mobile station as required by the present claims.” However, Applicant appears to refer to the usage of the invention claimed. While the Examiner agrees that the Salo reference does not alone meet the limitations of the independent claims, the question is whether there exists motivation for one having ordinary skill in the art to combine the teachings of Salo with Bao, as modified. Bao and Gellens each teach parts of a similar system, Bao teaching using a radio to transmit TCP packets and Gellens teaching provisioning a radio and specifically supporting TCP communication (see Gellens, §4.1 & §8.1). Gellens teaches adding this functionality to the mobile station reduces duplicate software in the mobile station (p. 28). Further, Raith teaches that it is well known in the art of cellular radio communications to incorporate multiple cells, each with their own base station, where a mobile station can communicate with a plurality of base stations to enable a mobile station to communicate from multiple cells (col. 9, lines 37-62 & col. 10, lines 1-28). As this applies to mobile cellular communication, one of ordinary skill in the art would have been motivated to specifically communicate using cells and base stations within the cells to allow further mobility with respect to the mobile stations. Bao, alone, does not teach encryption techniques such as IPSec, SSH, SSL/TLS or PPTP as Bao is teaching the data transfer protocol not particularly concerned with

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implementation (specific applications). While these techniques are well known in the art for packet-based communication (SSH is used in many secure FTP communications, SSL is used in the ubiquitous “https” protocol in combination with certificates in the public key infrastructure to provide security and private in web communication and IPsec is commonly used with virtual private networks), Applicant argues that one of ordinary skill would not have been motivated to combine Salo’s teaching of IPsec specifically with the wireless systems of Bao, as modified. However, Salo teaches that the IP Sec standard is known in the art and can provide encryption at the packet-processing layer (col. 13 lines 14-20). For at least the reason that the end units of Salo are communicating in accordance with the IPsec protocol for the explicit purpose of encryption and hence security, one would have been motivated to provide encryption functionality to Bao, as modified by Gellens and Raith. Furthermore, Gellens refers specifically to the fact that the mobile station can optionally perform encryption (§4.1), directly implying that one of ordinary skill in the art would have been motivated to provide encryption to the wireless system. As Salo teaches that IPsec is a good choice for encryption at a packet layer (col. 13, lines 14-20) and that IPsec is performed between two computing devices, one having ordinary skill in the art at the time the invention was made would have been motivated to modify Bao, as modified, to encrypt and decrypt packets according to the IP Sec tunneling protocol due to its commonality in the art as a packet-encryption technique and multiple options.

Drawings

8. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because Figs. 2-3 are dark, hence some detail is lost, have small text and handwritten

text which are difficult to read. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 1, 3-9, 11-17 & 19-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Performance evaluation of TCP/RLP protocol stack over CDMA wireless link" by **Bao** in view of "Wireless Device Configuration (OTASP/OTAPA) via ACAP" by **Gellens** in further view of U.S. Patent 5,241,598 to **Raith** in further view of U.S. Patent 6,609,148 to Salo et al. (**Salo**).

Regarding claims 1, 8-9, 16-17 & 24, Bao discloses a mobile station capable of communicating with a base station in a wireless network (Fig. 2) and receiving traffic (Fig. 2), said mobile station comprising an RF transceiver capable of receiving wireless messages/RLP over CDMA from said base station (Fig. 2) and converting said received wireless messages/RLP over CDMA to a plurality of internet protocol (IP) packets/TCP/IP packets (Figs. 1 & 2). Bao lacks a plurality of base stations, receiving at least one of a software program, a software

correction patch and provisioning data from a server associated with said wireless network, an encryption controller capable of converting said IP packets from an encrypted format to a decrypted format and a data burst message protocol controller capable of converting said decrypted IP packets to at least one data burst message. However, Gellens receiving provisioning data from a provisioning/OTAF server associated with said wireless network (§8.1, Fig. 8) and a data burst message protocol controller capable of converting IP packets to at least one data burst message/IS-683A message (IS-683A over TCP/IP) (p. 28, §8.1 - §8.1.1) to reduce duplicate software in the mobile station (§8.1.1, #1). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to receive provisioning data from a server and to include a data burst message controller to convert IP packets to at least one data burst message. One of ordinary skill in the art would have been motivated to perform such a modification to reduce duplicate software in the mobile station, as taught by Gellens (p. 28). Further, Gellens teaches that a mobile station should support end-to-end encryption (p. 9, §4.1) to gain security against attacks from within a carrier's network (p. 11, ¶1 & p. 29, #4). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to include an encryption controller capable of converting said IP packets from an encrypted format to a decrypted format. One of ordinary skill in the art would have been motivated to perform such a modification to protect against attacks from within the carrier's network, as taught by Gellens (p. 9, §4.1, p. 11, ¶1 & p. 29, #4). Further, Raith teaches that it is well known in the art of cellular radio communications to incorporate multiple cells, each with their own base station, where a mobile station can communicate with a plurality of base stations to enable a mobile station to communicate from multiple cells (col. 9, lines 37-62 & col. 10, lines

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1-28). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Bao to enable to mobile station to communicate with a plurality of base stations. One of ordinary skill in the art would have been motivated to perform such a modification to enable the mobile station to communicate from multiple cells, as taught by Raith (col. 9, lines 37-62 & col. 10, lines 1-28). Bao, as modified above, lacks explicit disclosure of IP sec, SSH, SSL or PPTP. However, Salo teaches that the IP Sec standard is known in the art and can provide encryption at the packet-processing layer (col. 13 lines 14-20). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to encrypt and decrypt packets according to the IP Sec tunneling protocol. One of ordinary skill in the art would have been motivated to perform such a modification as it was known in the art to provide packet encryption, as taught by Salo (col. 13 lines 14-20).

Regarding claims 3-7, 11-15 & 19-23, Bao, as modified above, lacks specific structures of the IP packets disclosed in Fig. 1 & Fig. 2. However, it is inherent that the IP datagram will contain IP layer information and an IP packet payload and the IP packet payload comprises TCP layer information. Further, by the combination of Gellens with Bao, (Gellens, p. 28, IS-683A over TCP/IP), the IP packet payload comprises over-the-air service provisioning payload/OTAF associated with said at least one data burst message/IS-683A message.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. The '680 patent reference is cited for teaching IPsec in wireless communication systems (see cols. 3-4).
- b. The Hansen reference is cited for teaching the use of IPsec for securing packets in Mobile IP (which uses a mobile terminal).

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Simitoski whose telephone number is (571) 272-3841. The examiner can normally be reached on Monday - Thursday, 6:45 a.m. - 4:15 p.m.. The examiner can also be reached on alternate Fridays from 6:45 a.m. – 3:15 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Morse can be reached at (571) 272-3838.

Any response to this action should be mailed to:
Commissioner for Patents

Art Unit: 2134

P.O. Box 1450
Alexandria, VA 22313-1450

Or faxed to:

(571) 273-8300
(for formal communications intended for entry)

Or:

(571) 273-3841 (Examiner's fax, for informal or draft communications, please label "PROPOSED" or "DRAFT")

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



MJS

December 6, 2005



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